**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) A method in a data processing system for monitoring execution of instructions, the method comprising:

identifying an instruction for execution;

determining whether the instruction is within a contiguous range of instructions; [[and]]

responsive to determining that the instruction is within a contiguous range of instructions, counting at least one of a number of times the contiguous range of instructions is entered during execution of a program and a number of times the instruction has been executed; and

providing a result of the counting ~~generating execution information relating to the instruction if the instruction is within the contiguous range of instructions~~.

2. (Canceled)

3. (Currently amended) The method of claim [[2]] 1, wherein the counting step comprises:

sending a signal from an instruction cache to a performance monitor unit; and

the performance monitor unit tracking the counting ~~of each event associated with an execution of the instruction if the instruction is within the contiguous range of instructions~~.

4. (Currently amended) The method of claim 1, wherein the contiguous range of instructions comprises one contiguous range of instructions, and further comprising:

determining whether the instruction is within ~~a second~~ another contiguous range of instructions; and

responsive to determining that the instruction is within the another contiguous range of instructions, counting at least one of a number of times the another contiguous range of instructions is entered during execution of the program and a number of times the instruction has been executed ~~generating the execution information relating to the instruction if the instruction is within the second contiguous range of instructions~~.

5. (Canceled)

6. (Previously Presented) The method of claim 1, wherein the determining step comprises:

comparing an address of the instruction to a set of addresses in a set of registers in a processor to determine whether the instruction is in the contiguous range of instructions.

7. (Original) The method of claim 6 further comprising:

setting the set of registers using a performance tool.

8. (Currently amended) A method in a data processing system for monitoring access to data in memory locations, the method comprising:

identifying an access to data in a memory location;

determining whether the memory location is within a contiguous range of memory locations; [[and]]

responsive to determining that the memory location is within a contiguous range of memory locations, counting at least one of a number of times the contiguous range of memory locations is accessed during execution of a program and a number of times the memory location has been accessed; and

providing a result of the counting ~~generating information relating to the memory location if the memory location is within the contiguous range of memory locations~~.

9. (Canceled)

10. (Currently amended) The method of claim [[9]] 8, wherein the counting step comprises:

sending a signal from a data cache to a performance monitor unit; and

the performance monitoring unit tracking the counting ~~of each event associated with an access of the memory location if the memory location is within the contiguous range of memory locations~~.

11. (Currently amended) The method of claim 8, wherein the contiguous range of memory locations comprises one contiguous range of memory locations, and further comprising:

determining whether the memory location is within ~~a second~~ another contiguous range of memory locations; and

responsive to determining that the memory location is within the another contiguous range of memory locations, counting at least one of a number of times the another contiguous range of memory locations is accessed during execution of the program and a number of times the memory location has

been accessed ~~generating the information relating to the memory location if the instruction is within the second contiguous range of memory locations~~.

12. (Canceled)

13. (Previously Presented) The method of claim 8, wherein the determining step comprises:

comparing an address of the memory location to a set of addresses in a set of registers in a processor to determine whether the memory location is in the contiguous range of memory locations.

14. (Original) The method of claim 13 further comprising:

setting the set of registers using a performance tool.

15. (Currently amended) A data processing system for monitoring execution of instructions, the data processing system comprising:

identifying means for identifying an instruction for execution;

determining means for determining whether the instruction is within a contiguous range of instructions; [[and]]

~~generating~~ counting means, responsive to determining that the instruction is within a contiguous range of instructions, for counting at least one of a number of times the contiguous range of instructions is entered during execution of a program and a number of times the instruction has been executed; and

providing means for providing a result of the counting ~~for generating execution information relating to the instruction if the instruction is within the contiguous range of instructions~~.

16. (Canceled)

17. (Currently amended) The data processing system of claim [[16]] 15, wherein the counting means comprises:

sending means for sending a signal from an instruction cache to a performance monitor unit; and

the performance monitor unit comprising tracking means for tracking the counting ~~of each event associated with an execution of the instruction if the instruction is within the contiguous range of instructions~~.

18. (Currently amended) The data processing system of claim 15, wherein the determining means [[is]] comprises a first determining means for determining whether the instruction is within one

contiguous range of instructions, and wherein the ~~generating~~ counting means [[is]] comprises a first ~~generating~~ counting means and further comprising:

second determining means for determining whether the instruction is within ~~a second~~ another contiguous range of instructions; and

second ~~generating~~ counting means, responsive to determining that the instruction is within the another contiguous range of instructions, for counting at least one of a number of times the another contiguous range of instructions is entered during execution of the program and a number of times the instruction has been executed ~~generating the execution information relating to the instruction if the instruction is within the second contiguous range of instructions~~.

19. (Canceled)

20. (Previously Presented) The data processing system of claim 15, wherein the determining means comprises:

comparing means for comparing an address of the instruction to a set of addresses in a set of registers in a processor to determine whether the instruction is in the contiguous range of instructions.

21. (Original) The data processing system of claim 20 further comprising:

setting means for setting the set of registers using a performance tool.

22. (Currently amended) A data processing system for monitoring access to data in memory locations, the data processing system comprising:

identifying means for identifying an access to data in a memory location;

determining means for determining whether the memory location is within a contiguous range of memory locations; [[and]]

~~generating~~ counting means, responsive to determining that the memory location is within a contiguous range of memory locations, for counting at least one of a number of times the contiguous range of memory locations is accessed during execution of a program and a number of times the memory location has been accessed; and

providing means for providing a result of the counting ~~generating information relating to the memory location if the memory location is within the contiguous range of memory locations~~.

23. (Canceled)

24. (Currently amended) A computer program product in a recordable-type computer readable medium for monitoring execution of instructions, the computer program product comprising:

first instructions for identifying an instruction for execution;

second instructions for determining whether the instruction is within a contiguous range of instructions; [[and]]

third instructions, responsive to determining that the instruction is within a contiguous range of instructions, for counting at least one of a number of times the contiguous range of instructions is entered during execution of a program and a number of times the instruction has been executed; and

fourth instructions for providing a result of the counting ~~generating execution information relating to the instruction if the instruction is within the contiguous range of instructions~~.

25. (Currently amended) A computer program product in a recordable-type computer readable medium for monitoring access to data in memory locations, the computer program product comprising:

first instructions for identifying an access to data in a memory location;

second instructions for determining whether the memory location is within a contiguous range of memory locations; [[and]]

third instructions, responsive to determining that the memory location is within a contiguous range of memory locations, for counting at least one of a number of times the contiguous range of memory locations is accessed during execution of a program and a number of times the memory location has been accessed; and

fourth instructions for providing a result of the counting ~~for generating information relating to the memory location if the memory location is within the contiguous range of memory locations~~.